



UNITED STATES PATENT AND TRADEMARK OFFICE

cen

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,404	02/06/2004	Shougo Sato	118571	5029

25944 7590 09/11/2007
OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

GRAINGER, QUANA MASHELL

ART UNIT	PAPER NUMBER
----------	--------------

2852

MAIL DATE	DELIVERY MODE
-----------	---------------

09/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/772,404

Applicant(s)

SATO, SHOUGO

Examiner

Quana M. Grainger

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-18, 20-42 and 44-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-8, 12-18, 23-25, 27-46, 50 and 51 is/are rejected.
- 7) ☒ Claim(s) 9-11, 20-22, 26 and 47-49 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Title

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2 and 27-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 2 recites that the photosensitive body defines a plurality of photosensitive drums which does not make any sense in general and does not agree with the limitations regarding the photosensitive body from claim 25. Claims 27-49 are objected to because the cartridge frame does not move relative to the photosensitive body as claimed. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2852

5. Claims 5, 7, 12-14, 17, 23-25, 27-45 (indefinite), and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida (JP2001-255777A, cited by applicant) in view of Arimitsu et al. (2003/0142991A1).

Ishida teaches a processing device 21 includes one of a charging unit 31 that uniformly charges a surface of the photosensitive body 10 prior to the formation of the electrostatic latent image, a developing unit 21 that supplies a charged developing agent onto a surface of the photosensitive body 10 on which the electrostatic latent image is formed to develop the electrostatic latent image, and a cleaning unit 32 that removes developing agent remaining on the surface of photosensitive body after a transfer of the developing agent is performed (abstract; figure 3 & 4). The processing device is a developing unit 21 that supplies a charged developing agent onto the surface of photosensitive body on which the electrostatic latent image is formed to develop the electrostatic latent image. The mainframe includes a guide portion that guides a movement of the process cartridge at the time of loading and unloading (figure 3 & 4, [0007-0008]). The predetermined positional relation is a positional relation immediately after the process cartridge has been taken out from the mainframe (figures 4 & 3). The photosensitive body includes a photosensitive drum 10; and the processing device 21 relatively moves around an axial line of the photosensitive drum 10. The photosensitive body includes a photosensitive drum 10; and the process cartridge is loaded and unloaded in a direction substantially orthogonal to an axial line of the photosensitive drum. Ishida teaches a process cartridge loadable in and unloadable from an image forming apparatus, comprising: a photosensitive body 10; and a processing device acting on the photosensitive body; wherein relative positions of the photosensitive body and the processing device are changeable when the process cartridge is

Art Unit: 2852

loaded in and unloaded from the image forming apparatus; and at least one of the photosensitive body and the processing device have a first guided portion that fits with a second guide portion that is provided in the image forming apparatus. The processing device includes one of a charging unit that uniformly charges a surface of the photosensitive body prior to the formation of an electrostatic latent image thereon, a developing unit that supplies a charged developing agent onto the surface of the photosensitive body on which the electrostatic latent image is formed to develop the electrostatic latent image, and a cleaning unit that removes developing agent remaining on the surface of the photosensitive body after a transfer of the developing agent is performed. The predetermined positional relation is a positional relation immediately after the process cartridge has been taken out from the image forming apparatus (figures 4 & 3; [0020-0029]). The photosensitive body includes a photosensitive drum; and the process cartridge is loaded and unloaded in a direction substantially orthogonal to an axial line of the photosensitive drum. Ishida teaches an image forming apparatus, comprising: a mainframe having a guide portion; a process cartridge that is loadable in and unloadable from the mainframe while being guided by the guide portion, the process cartridge accommodating a photosensitive body and a processing device that acts on the photosensitive body; wherein the guide portion guides one of the photosensitive body and the processing device to shift a position of the one of the photosensitive body and the processing device relative to the process cartridge when the process cartridge is loaded in and unloaded from the mainframe (figures 3 & 4). The image forming apparatus further comprising: an elastic body that is interposed between the photosensitive body and the processing device. Ishida teaches an image forming apparatus, comprising: a mainframe; and a process cartridge loadable in and unloadable from the mainframe, the process cartridge

Art Unit: 2852

including: a cartridge frame; a photosensitive body; and a developing roller, facing the photosensitive body, the cartridge frame defining a container, frame that contains a developer, the developer being supplied to the developing roller; and wherein the photosensitive body and the cartridge frame are connected such that positions of the photosensitive body and the cartridge frame are changeable relative to one another while the process cartridge is loaded in and unloaded from the mainframe (abstract; figures 3 & 4; [0007-0008; 0020-0029]).

Arimitsu et al. teaches a process cartridge which is on the along a horizontal in line with the exposure unit. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teaching of Ishida with an image forming apparatus such as taught by Arimitsu et al. to provide an image forming device capable of holding a press-contact member and a photoreceptor drum in a state where the press-contact member is not strongly pressed to the photoreceptor drum when a photoreceptor unit is single (Ishida et al; abstract: lines 1-7).

6. Claims 4-5, 7-8, 12-14, 16-17, 23-25, 27-45 (indefinite), 46, and 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takiguchi (JP9-152826A) in view of Arimitsu et al.

Takiguchi comprises a mainframe 21 having a guide portion 15, 17; a process cartridge 5 that is loadable in and unloadable from the mainframe while being guided by the guide portion, the process cartridge 5 accommodating a photosensitive body 7 and a processing device 3 that acts on the photosensitive body 7; wherein the guide portion 15, 17 guides one of the photosensitive body and the processing device to shift a position of the one of the photosensitive body and the processing device relative to the process cartridge when the process cartridge is loaded in and unloaded from the mainframe (abstract; figures 1-2 and 4; [0017-0026]). The

Art Unit: 2852

processing device includes one of a charging unit that uniformly charges a surface of the photosensitive body prior to the formation of the electrostatic latent image, a developing unit that supplies a charged developing agent onto a surface of the photosensitive body on which the electrostatic latent image is formed to develop the electrostatic latent image, and a cleaning unit that removes developing agent remaining on the surface of photosensitive body after a transfer of the developing agent is performed (figures 1-2, 4). The mainframe 21 includes a guide portion 15 that guides a movement of the process cartridge at the time of loading and unloading (figures 1-2, 4). The at least one of the photosensitive body and the processing device have a guided portion fittable with the guide portion; and the relative positions change due to at least one of the photosensitive body and the predetermined processing device moving along the guide portion. The predetermined positional relation is a positional relation immediately after the process cartridge has been taken out from the mainframe 21. The photosensitive body includes a photosensitive drum; and the processing device relatively moves around an axial line of the photosensitive drum (figure 3). The photosensitive body includes a photosensitive drum; and the process cartridge is loaded and unloaded in a direction substantially orthogonal to an axial line of the photosensitive drum (figures 1-2, 4). Takiguchi teaches a process cartridge loadable in and unloadable from an image forming apparatus, comprising: a photosensitive body; and a processing device acting on the photosensitive relative positions of the photosensitive body and the processing device are changeable when the process cartridge is loaded in and unloaded from the image forming apparatus; and at least one of the photosensitive body and the processing device have a first guided portion that fits with a second guide portion that is provided in the image forming apparatus. The processing device includes one of a charging unit that uniformly

Art Unit: 2852

charges a surface of the photosensitive body prior to the formation of an electrostatic latent image thereon, a developing unit 3 that supplies a charged developing agent onto the surface of the photosensitive body on which the electrostatic latent image is formed to develop the electrostatic latent image, and a cleaning unit that removes developing agent remaining on the surface of the photosensitive body after a transfer of the developing agent is performed. The process cartridge further comprising: an elastic body disposed between the photosensitive body and the processing device so that, when the process cartridge is removed from the image forming apparatus, the relative positions can assume a predetermined positional relation where the process cartridge is easily loaded in the image forming apparatus [0017-0030]. The photosensitive body includes a photosensitive drum; and the processing device relatively moves around an axial line of the photosensitive (figure 3). The photosensitive body includes a photosensitive drum; and the process cartridge is loaded and unloaded in a direction substantially orthogonal to an axial line of the photosensitive drum.

Takiguchi teaches an image forming apparatus, comprising: a mainframe; and a process cartridge loadable in and unloadable from the mainframe, the process cartridge including: a cartridge frame; a photosensitive body; and a developing roller, facing the photosensitive body, the frame defining a container that contains a developer, the developer being supplied to the developing roller; and wherein the photosensitive body and the cartridge frame are connected such that positions of the photosensitive body and the cartridge frame are changeable relative to one another while the process cartridge is loaded in and unloaded from the mainframe [0017-0030]. Takiguchi teaches a process cartridge, comprising: a cartridge frame; a photosensitive body; a developing roller, facing the photosensitive body; a container, provided inside the

Art Unit: 2852

cartridge frame that contains a developer, the developer being supplied to the developing roller; and a first transformation element 9 that is transformable between in a first original shape and in a first transformed shape, the first transformation element connecting the photosensitive body and the cartridge frame (figure 1-2, 4; [0017-0030]).

Arimitsu et al. teaches a process cartridge which is on the along a horizontal in line with the exposure unit. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teaching of Takiguchi with an image forming apparatus such as taught by Arimitsu et al. to provide a printer capable of forming an image of high quality (Takiguchi; abstract: lines 1-3).

7. Claims 2-3, 6, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida or Takiguchi in view of Arimitsu et al. Neither Ishida nor Takiguchi teaches a photosensitive body defines a plurality of photosensitive drums corresponding to a plurality of colors; the processing device faces a surface of the photosensitive body and acts on the photosensitive body without contacting; and the process cartridge includes a grip portion disposed on the developing unit. The examiner takes official notice that it is known in the art to supply a grip handle for an image forming cartridge, to use a process cartridge in an image forming apparatus that uses plural colors, and form a process cartridge with a non-contacting type development device. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teaching of Ishida or Takiguchi with an image forming apparatus that has the previously mentioned conventional type image forming device to provide a printer capable of forming an image of high quality (Takiguchi; abstract: lines 1-3).

Allowable Subject Matter

8. Claims 9-11, 20-22, 26, and 47-49 contain allowable subject matter.

Response to Arguments

9. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quana M. Grainger whose telephone number is 571-272-2135. The examiner can normally be reached on 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2852

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Quana M Grainger
Primary Examiner
Art Unit 2852

QG